



AVESTAR™ is dedicated to the operation and control of advanced energy plants with carbon capture.

The AVESTAR™ Center offers a combination of classroom and dynamic simulator instruction. High-fidelity dynamic models coupled with full-scope Operator Training Systems (OTS) enable trainees to gain valuable hands-on experience and skills with commercial-scale energy plants.

3-D virtual reality technology adds another dimension of realism to the training. Immersive Training Systems (ITS) extend simulator scope to both control room and outside operators and allows them to work as a team. Benefits of combined OTS/ITS training go beyond those of traditional simulation and include more realistic scenarios, improved communication and collaboration among work crews, off-line evaluation of procedures, and off-line training of rare abnormal situations.

The AVESTAR™ Center can be used for technology familiarization, education and training services, plant operation and control demonstrations, and hands-on simulator-based training. Current training courses are available for an advanced integrated gasification combined cycle (IGCC) power station capable of 90% pre-combustion CO₂ capture, as well as low sulfur, mercury, and NO_x emissions.

The AVESTAR™ Center aims to develop a workforce well-prepared to operate, control, and manage next-generation power plants with carbon capture.

Facility and Features:

- Full scale, high-fidelity dynamic simulators
- Realistic control room and plant infrastructure
- Fully immersive 3-D virtual reality environment
- Applicable to various levels of expertise
- Allows for testing of various feedstocks

Opportunities:

- Provide a trained workforce for the energy industry
- Accelerate development of innovative procedures for plant startup, shutdown, and load following
- Collaborate with energy experts on advanced R&D program

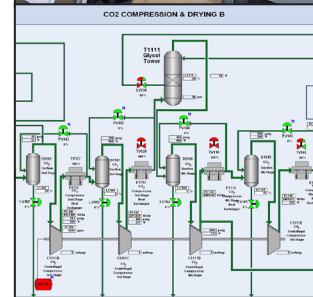
Located in Morgantown, WV

DOE's National Energy Technology Laboratory and WVU's National Research Center for Coal and Energy

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